

Remarks

Applicants thank the examiner for examining the present application and for finding that Claims 8, 34-35, 41-42, and 52 contain allowable subject matter.

With entry of this amendment, Claims 1, 2, 4-6, 8-10, 22, 24-39, 41-53, and 148-149 remain. Claims 3, 7, 40, and 138-147 have been canceled. Claims 11-21, 23, and 54-137 have been withdrawn as the result of an earlier restriction requirement.

Claims 3 and 7 have been canceled and the limitations recited therein have been incorporated into Claim 1. Claims 4 and 8 have been amended to correct dependencies due to the cancellation of Claims 3 and 7. Furthermore, Claim 8 has been amended to correct a misspelling of the word "approximately."

Claim 10 has been amended to include Ti and Zr in the Markush grouping of getter materials. Support for the amendment can be found, for example, at pg 5, paragraph [0017], which says, "Getter materials are those that readily collect free gases by adsorption, absorption, and/or occlusion and commonly include Al, Mg, Th, Ti, U, Ba, Ta, Nb, Zr, and P, though several others also exist." No new matter has been introduced.

The examiner has rejected Claim 40 as being indefinite for containing a tradename under 35 U.S.C. §112. Claim 40 has been canceled.

The Examiner has objected to Claim 41 as being dependent upon a rejected base claim but considers the claim to be allowable if rewritten in independent form. Accordingly, Claim 41 has been amended and rewritten to include all of the limitations of the base claim and any intervening claims. Claim 42 has been amended to correct dependencies due to the amendment of Claim 41.

By this amendment, new Claims 148 and 149 are submitted for consideration. Support for new Claims 148 and 149 can be found in the specification at, for example, page 4, paragraph [0015], which states, “The invention encompasses a feedstock comprising an aromatic binder system and a metal powder. The aromatic binder system comprises at least one aromatic species and can *optionally* comprise polymers, lubricants, and/or surfactants.” Claims 148 and 149 claim an embodiment wherein the aromatic binder system consists of a metal powder and at least one aromatic species, which does not contain polymers, lubricants, and/or surfactants. No new matter is introduced.

Claims 1 and 7

Herrmann does not teach each and every element of original Claim 7:

The Examiner has rejected Base Claim 1 as being anticipated under 35 U.S.C. § 102(b) by U.S. Patent 3,330,892 (“Herrmann”) (Office Action pg. 3). Applicant has amended original Claim 1 to include the limitations of Claim 7, which recites that the aromatic binder system comprises less than approximately 40 vol% of an aromatic species. Since original Claim 7 should be allowable, as discussed below, the currently amended Claim 1 should be allowable. .

The examiner rejects Claim 7 as being anticipated under 35 U.S.C. § 102(b) by Herrmann (Office Action pg. 3). The rejection is traversed. A proper anticipation rejection requires that a “reference...teach every element of the claim (MPEP 2131).” Herrmann fails to teach all the features of Claim 7. Therefore, Claim 7 is properly allowable over Herrmann.

The examiner states that “Herrmann discloses employing nickel and copper as metal powder for the moldable batch mixture where approximately 80% by weight of the metal powder and 17% by weight of aromatic species are used.” Applicants have recited their claims in terms of volume percent. The examiner has acknowledged the difference between volume percent and weight percent but has taken the position that the weight percentages taught by Herrmann encompasses the Applicants’ claimed amounts absent evidence to the contrary. Applicants have performed calculations to determine the equivalent weight percent of 40 vol%. Applicants found that 40 vol% of the aromatic species, as recited in Claim 7, is equal to approximately 14 wt%. Herrmann does not teach a composition having less than 14 wt% of the aromatic species. Accordingly, the Examiner’s rejection of Claim 7 should be withdrawn. Since Claim 1 has been rewritten to include the limitations of original Claim 7, which is properly allowable, currently amended Claim 1 should be allowed and Applicants respectfully request such action.

JP06-002011 does not teach each and every element of currently amended Claim 1:

The examiner also rejects original Claim 1 as being anticipated under 35 U.S.C. § 102(b) by JP06-002011. The Examiner has cited two examples from JP06-002011 that the Examiner believes anticipate original Claim 1. The first example is a mixture that includes 450g of “4TiAl,” 5g of Ti powder, and 165g of dichloronaphthalene (JP06-002011, pg. 4, line 7). The weight percent of the “sublimable material” (i.e., dichloronaphthalene) relative to the total mixture is 27 wt%. In the second example from JP06-002011 cited by the Examiner, the mixture includes 500g of “8nickel3aluminum” powder, 100g of PARAJI chlorobenzene powder, and 50g naphthalene (JP06-002011, pg.

4, line 37). The weight percent of the “sublimable material” (i.e., PARAJI chlorobenzene and naphthalene) relative to the total mixture is 23 wt%.

Currently amended Claim 1 includes a limitation (from original Claim 7) that the aromatic binder system comprises less than approximately 40 vol% aromatic species. As described above, Applicants have determined that 40 vol% of the aromatic species is approximately equivalent to 14 wt%. The examples cited by the Examiner from JP06-002011 do not teach currently amended Claim 1. Accordingly, Applicants respectfully request that currently amended Claim 1 be allowed by the Examiner.

Neither Morita nor JP04-116104 nor the combination of Kiyota and JP04-116104 teach each and every element of currently amended Claim 1:

The examiner also rejects original Claim 1 as being anticipated under 35 U.S.C. § 102(b) by U.S. Patent Application 2002/0057980 (“Morita”) and by JP04-116104 and as being obvious under 35 U.S.C. § 103(a) over Kiyota in view of JP04-116104. As described above, original Claim 1 has been amended to include a limitation that the aromatic binder system comprise less than approximately 40 vol% (i.e., approximately 14 wt%) aromatic species. Neither Morita, nor JP04-116104, nor the combination of Kiyota and JP04-116104 teach that the binder comprises less than approximately 40 vol% of the total mixture. Currently amended Claim 1 is, therefore, believed to be properly allowable and Applicant respectfully requests such action by the Examiner.

Dependent Claims 2, 4-6, 8-10, 22, 24-39, 41-53, and 148-149 are also allowable:

The Examiner has rejected dependent Claims 2, 4-6, 8-10, 22, 24-39, 41-53, and 148-149 as being either anticipated by Herrmann, Morita, JP04-116104, JP06-002011, or JP04-116104, or obvious over Kiyota in view of JP04-116104. Since the instant Claims are dependent on currently amended Claim 1, they are believed to be allowable for at least the reasons stated above with respect to currently amended Claim 1. Further, Claims 2, 4-6, 8-10, 22, 24-39, 41-53, and 148-149 are each independently patentable because of the unique and nonobvious features of the combinations set forth in each claim.

Currently amended Claim 1 believed to be generic

As described above, Applicants believe currently amended Claim 1 to be in condition for allowance and respectfully request allowance of said claim. Furthermore, Applicants believe Claim 1 to be generic. Accordingly, Applicants request consideration of Claims 11-21, and 23 for rejoinder under MPEP §809.02. Claims 11-21 and 23 are written in dependent form, having currently amended Claim 1 as their base claim, and include all the limitations of currently amended, generic Claim 1, which is believed to be in condition for allowance.

Conclusion

For the reasons recited above, the application is believed to be in condition for allowance. Therefore, Applicants respectfully request that a timely Notice of Allowance be issued in this case. No additional claim fees are believed to be due. However, should such fees exist, or if any additional fees may be required in connection with filing this

amendment and any extension of time, the Director is hereby authorized to charge our
Deposit Account No. 02-1275.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Allan C. Tuan', with a long horizontal flourish extending to the right.

Allan C. Tuan
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